

Application No.: 10/019,048  
Inventor: HEINZ et al.  
Reply to Notice of 12 February 2007  
Docket No.: 0093/000032

### **REMARKS/ARGUMENTS**

Claims 1-17 are currently pending. Claims 1, 3-4 and 9 have been amended in accordance with the Examiner's suggestions in the Action of 7 October 2006 and 12 February 2007. Claims 1-5 and 7-10 have been amended to further clarify the invention. Claims 13-17 are new. Support for new claim 13 can be found in the specification at least on page 3, lines 17-18. Support for new claim 14 can be found in the specification at least on page 7, lines 16-21, and page 10, lines 44-47. Support for claims 15-17 can be found at least on page 7, lines 16-21 and page 11, lines 24-29.

#### **Claim Objections**

Claim 1 was objected to for allegedly containing informalities. The Examiner stated that the term "this organism" was inconsistent with the terms in the other claims. Claim 1 has been amended to recite "the organism" in accordance with the Examiner's suggestion.

Accordingly, Applicant respectfully requests withdrawal of the objection.

#### **Rejections under 35 USC § 101**

Claim 9 was rejected for allegedly being directed to non-statutory subject matter. Applicant respectfully disagrees but nonetheless, has amended claim 9 to delete the term "animals."

Accordingly, Applicant respectfully requests its withdrawal of the objection.

#### **Claim Rejections under 35 USC § 112 ¶2**

Claims 1-10 are rejected for allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention. Applicant respectfully traverses the rejection.

It is well settled that the "language of the claims, read in light of the specification" is to be considered when determining whether the claims are definite (*Allen Archery Inc. v Browning MFG. Co.*, 819 F.2d 1087, 1092 (Fed. Cir. 1987)). This precept has been incorporated into the

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MPEP which states that “[t]he meaning of every term used in any of the claims should be apparent from the descriptive portion of the specification with clear disclosure as to its import” (MPEP §608.01(o). *See also* 37 CFR 1.75 (c) wherein it states in part that “the meaning of the terms in the claims may be ascertainable by reference to the description”). Moreover, the definiteness of the language employed “must be analyzed - not in a vacuum, but always in light of the teachings of the prior art and of the particular application disclosure as it would be interpreted by one possessing the ordinary level of skill in the pertinent art” (*In re Angstadt*, 537 F.2d 498, 501 (CCPA 1976)(quoting *In re Moore*, 439 F.2d 1232, 1235 (CCPA 1971))). The law is clear that “if the claims, read in the light of the specifications, reasonably apprise those skilled in the art both of the utilization and scope of the invention, and if the language is as precise as the subject matter permits, the courts can demand no more” (*North Am. Vaccine, Inc. v American Cyanamid Co.*, 7 F.3d 1571, 1579-1580 (Fed. Cir. 1993)(quoting *Shatterproof Glass Corp. v. Libbey-Owens Ford, Co.*, 758 F.2d 613, 624 (Fed. Cir. 1985)).

Accordingly, Applicant respectfully submits that the phrase “substantially reducing” is definite because one of ordinary skill in the art could determine its metes and bounds in light of the instant specification and that knowledge generally known to the skilled artisan. The Examiner asserts that the term “substantially reducing” is indefinite because, “[f]or example, one of ordinary skill would not know whether 10 or 51% constitutes a “substantial reduction”” (Office Action, 07 October 2006, page 3). Applicant respectfully asserts that one of ordinary skill in the art could determine the metes and bounds applying the disclosure of the instant specification with that which is known in the art. The Examiner is directed to page 10, lines 38-47 of the instant specification, as originally filed, wherein the term “substantially reducing” is defined: “[n]ot substantially reduced is to be understood as meaning all enzymes which still have at least 10%, preferably 20%, especially 30%, of the enzymatic activity of the starting enzyme.”

In light of the aforementioned disclosure, the metes and bounds of the phrase “substantially reducing” is readily determinable by one of ordinary skill in the art.

Additionally, the Examiner asserts that the phrase “the enzymatic action of the

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polypeptides" in claim 1 allegedly lacks antecedent basis and that the term should be replaced with "the Δ6-desaturase activity." Applicant respectfully disagrees, but, nevertheless, has amended claim 1 in accordance with the Examiner's suggestion on page 3 of the 07 October 2005 Office Action.

Applicant notes that a recent Federal Circuit opinion, *Energizer Holdings v. ITC*, 435 F.3d 1366 (Fed. Cir. 2006), stated that a lack of antecedent basis alone does not render a claim indefinite under §112 ¶2.

Claims 2-3 are rejected for allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention. Applicant respectfully traverses the rejection. Nonetheless, Applicant has amended Claims 2-3 to recite "isolated" nucleic acid.

Claim 4 is rejected for allegedly being vague and indefinite because the Examiner believes that it is unclear how an animal can be cultured. Applicant respectfully disagrees.

Instant claim 4 is written for one of ordinary skill in the art, and as such, a certain amount of skill and knowledge in the subject area is deemed to be known and understood by such individual. A person of ordinary skill in the art would readily appreciate that a whole animal cannot be cultured in the sense of the instant invention, but such individual would clearly understand what was meant by the term animal in claim 4. i.e., animal cells (see e.g. page 3, lines 34-37 of the instant specification). Consequently, claim 4 is definite because one of ordinary skill in the art would understand, in light of the specification that a whole animal is not cultured.

Claim 9 is rejected for a similar reason as stated above for Claim 1, antecedent basis and a request for term replacement. Applicant respectfully disagrees but has amended claim 9 in accordance with the Examiner's suggestion on page 5 of the 07 October 2005 Office Action.

Applicant respectfully requests withdrawal of 112 rejections in light of the amended claims and arguments contained herein. All of the Examiner's objections and rejections have been addressed and favorable action is solicited.

#### **Claim Rejections under 35 USC § 112 ¶1**

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Claims 1-10 are rejected for allegedly failing to provide adequate written description for the instant claims. Applicant respectfully traverse the rejection.

The Examiner believes the instant disclosure fails to describe or identify the necessary structures within SEQ ID NO: 1 or any structural domains that are common to the derivatives of the sequence and sufficient for Δ6-desaturase activity. Further, the Examiner asserts the instant claims encompass any polypeptide of any length derived from SEQ ID NO: 1. Additionally, the Examiner dismisses Applicant's previous arguments regarding algorithms and sequence isolation techniques as not addressing the issue of the prior 35 USC § 112 ¶1 rejections. In short, the Examiner believes the current invention, because of its lack of disclosure of embodiments, could not be envisaged by one of ordinary skill in the art and that undue experimentation would be needed by one of ordinary skill in the art to attempt to practice the instant invention.

### **Written Description**

Applicant's disclosure properly and adequately describes the instant claimed invention in compliance with §112. To satisfy the written description prong of 35 USC §112 ¶1, the specification must only describe the invention in sufficient detail so that one skilled in the art can clearly conclude that "the inventor invented the claimed invention" (*Lockwood v. American Airlines, Inc.*, 107 F.3d 1565, 1572 (Fed. Cir. 1997)). No particular form of disclosure is required, but "the description must clearly allow persons of ordinary skill in the art to recognize that [the patentee] invented what is claimed" (*In re Gosteli*, 872 F.2d 1008, 1012 (Fed. Cir. 1989)) (citing *In re Wertheim*, 541 F.2d 257, 262 (CCPA 1976)).

The Federal Circuit stated in *Capon v. Eshhar* that "[t]he 'written description' requirement states that the patentee must describe the invention; it does not state that every invention must be described in the same way (418 F.3d 1349 (Fed. Cir. 2005)). As each field evolves, the balance also evolves between what is known and what is added by each inventive contribution" (*Id.* at 1358). In overturning a BPAI decision, which relied on similar rejection reasons as stated in the instant Office Action, where both parties to an interference had all claims in their respective patents cancelled for failing to meet the written description requirement, the

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court stated that “[i]t is not necessary that every permutation with a generally operable invention be effective in order for an inventor to obtain a generic claim” and both parties were lauded because they “present[ed] not only general teachings... but also specific examples” (*Id.* at 1359).

Applicant respectfully asserts that the instant specification complies with all the aforementioned requirements and conveys to one skilled in the art that the Applicant had possession of the claimed invention at the time of filing. Applicant meets the “general teachings” prong by disclosing summary information such as the function of desaturases, fatty acids and triglycerides, and general molecular biology techniques, and the “specific examples” prong by disclosing a specific example of the nucleic acid sequence for the desaturase, SEQ ID NO: 1 and the corresponding amino acid, SEQ ID NO: 2. Moreover, beginning on page 25 of the specification, as originally filed, Applicant provides specific details for practicing an embodiment of the instant claimed invention. In view of *Capon*, and the state of the art of biotechnology at the time of filing, the specification fully complies with all written description requirements.

Further, the Examiner states on:

1) page 8 of the 07 October 2005 Office Action that "the only embodiment disclosed is the moss  $\Delta$ -6-desaturase, which is transformed into *A. thaliana* and oil seed rape plants ... In other words, a representative number of embodiments of derivatives is not disclosed...."

2) page 9 of the 07 October 2005 Office Action that "a representative number of species has not been disclosed ...."

3) page 10 of the 07 October 2005 Office Action "... does not equate to possession of a sufficient number of embodiments."

The MPEP states that a “[d]escription of a representative number of species does not require the description to be of such specificity that it would provide individual support for each species that the genus embraces” and as such, a single species may be enough to identify the

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entire genus (*see*, MPEP 2163.II.A.3.a.ii.). Indeed, the claims are written in such a manner that the problems of insufficient numbers as described by the Examiner in the Office Actions should not apply. In short, Applicant's examples fully support the scope of the claims. Applicant respectfully asserts that the instant specification fully complies with all the aforementioned requirements because it allows one of ordinary skill in the art to practice the claimed invention.

The Federal Circuit reaffirmed the long standing edict described above regarding the lack of a requirement of examples in *Falkner v. Inglis* (448 F.3d 1375 (Fed. Cir. 2006)). In that case, the court asserted that "[f]irst, it is clear that the absence of examples ... does not render the written description inadequate" (*Id.* at 1366) and quoted *LizardTech, Inc. v. Earth Resource Mapping, PTY, Inc.* (424 F.3d 1336, 1345 (Fed Cir. 2005))(internal quotations omitted) stating that "[a] claim will not be invalidated on *section 112* grounds simply because the embodiments of the specification do not contain examples explicitly covering the full scope of the claim language." Indeed, the court, in accordance with prior case law, held that "examples are not necessary to support the adequacy of a written description" (*Id.*). Despite the fact that the Applicant is not required to provide even a single example to comply with the requirements for an adequate disclosure, Applicant nonetheless submitted at least SEQ ID NO: 1 and SEQ ID NO: 2 to fulfill the requirements under 35 USC 112 ¶1.

Applicant respectfully asserts that the Examiner has improperly mandated a quantifiable number of species. Any requirement for a mandatory number of species is contrary to USPTO practice and Federal Circuit precedent and, as such, the Examiner's statement indicating an insufficiency in the number disclosed in the instant specification is in error. If however, contrary to Applicant's assertions above, the Examiner has personal information not of record used to determine "sufficient" numbers of examples, Applicant respectfully requests an Examiner's affidavit, as set forth in MPEP 1.104(c)(D)(2), indicating the use of personal knowledge and allowance for Applicant to respond to said personal knowledge. Additionally, further application of *Capon* is required here because the skill and knowledge in the field at the time of filing was such that the species disclosed in the instant specification provide sufficient description by actual reduction to practice. Consequently, the instant invention has been sufficiently disclosed and

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sufficiently supported by experimental data wherein sufficient written description for the entire genus based on the applicable standards is provided. Applicant respectfully asserts that the Examiner has applied an erroneous standard for claiming a genus and that they are entitled to claim additional embodiments which are not represented by individual species, i.e. the genus from the species recited.

*Falkner* also addresses the requirement for a structural description of the claimed biological substance. The court held that "there is no per se rule that an adequate written description of an invention that involves a biological macro molecule must contain a recitation of a known structure" (*Id.*). In light of the aforementioned, Applicants respectfully assert that the Examiner erroneously rejected the instant claims on grounds that "the disclosure fails to identify a structure function correlation with respect to derivatives of any size encoding functional polypeptides or derivatives ...." (Office Action 07 October 2005, page 9). In fact, upon application of the proper standard under 112, Applicants respectfully assert that the skilled artisan, from at least the disclosure in the specification, would have knowledge of other desaturase genes and proteins, and their structures and physical characteristics. For example, Applicant respectfully asserts that the skilled artisan would know of the degeneracy of the genetic code wherein two or more triplets code for the same amino acid, i.e., CCU, CCA, CCC, and CCG all encode proline.

The instant disclosure, analyzed in view of the MPEP and at least *Capon* and *Falkner*, provides an adequate written description for one of ordinary skill in the art to practice the instant invention. The instant disclosure fulfills the requirements of *Capon* with "general teachings" and "specific examples." Further, as per *Falkner*, no examples are necessary but are provided nonetheless and no recitation of known structures are required because one of ordinary skill in the art would have this knowledge. Consequently, examined in light of the state of the art, the skilled artisan would clearly conclude that the inventor "at the time the application was filed, had possession of the claimed invention" and thus meets the requirements of the written description prong of 35 USC 112.

### **Enablement**

Claims 1-10 stand rejected for allegedly being non-enabled. The Examiner asserts that the specification, while “enabling for expressing the Δ-6-desaturase of SEQ ID NO: 2 in a plant or algae, does not reasonably provide enablement for expressing the Δ-6-desaturase or derivatives/fragments thereof in an animal” (Office Action, 07 October 2005, page 14). Applicant respectfully disagrees.

Applicant respectfully asserts that all of the instant claims are enabled consistent with the requirements as set forth under the enablement prong of 35 USC 112 ¶1. In this regard, the Federal Circuit stated that “[t]he specification need not explicitly teach those in the art to make and use the invention; the requirement is satisfied if, given what they already know, the specification teaches those in the art enough that they can make and use the invention without ‘undue experimentation’” (*Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1334 (Fed. Cir. (2003))). Applicant respectfully asserts that the claims are fully enabled by the specification of the application in combination with the general knowledge of one of ordinary skill in the art and offer the following remarks.

The Examiner sets forth a number of reasons for imposing the enablement rejection<sup>1</sup>. However, all these reasons boil down to the following. Namely, the Examiner is asserting that whole animal expression of Δ-6-desaturase is not routine and that homology alone is not a sufficient determinant of enablement. No claims recite whole animals (see above for Applicant’s 112 ¶2 argument) or that homology alone is determinative of function. As is clear from Applicant’s disclosure, the term “animal” refers to animal cells (specification page 3, lines 34-37). Indeed in regard to all of the Examiner’s 112 ¶1 assertions, one of ordinary skill would understand that applicant refers to animal cells, not whole animals. Moreover, the claims require a functional component and a percentage homology. Claim 1 recites, in part, “without substantially reducing Δ6-desaturase activity of the polypeptide” thus requiring a specific level of enzymatic activity. Accordingly, Applicant respectfully asserts that the Examiner has

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<sup>1</sup> For example, in the Office Action of 07 October 2005, on page 15, the Examiner asserts that “[t]he claims are of vast scope and breadth.” On page 8, the Examiner states that “the evidence does not support the assertion that it would be routine to express heterologous D6D ... in higher organisms, such as animals.”

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erroneously rejected the instant claims as non-enabled using an improper interpretation of the art and the claims, and that the rejection is moot.

The Examiner makes a number of Procrustean assertions in regard to the state of the art and what the skilled artisan might or might acknowledge as the aforementioned state of the art in the 07 October 2006 Office Action. Applicant lists some examples and provides factual and objective evidence to demonstrate the error in these interpretations:

- 1) "... to attempt to predict activity based on homology is unpredictable at best. (See, Berendsen. *Science*. 1997; 262 642-3; indicating that accurate predication cannot be based on primary structure alone)"(page 13).

The Berendsen perspective-type article describes a further article in the 262 issue of *Science* - the Duan and Kellman research paper beginning on page 740. To the best of Applicant's knowledge, the Duan and Kellman research paper is unrelated to the prediction of enzymatic activity from an amino acid sequence. Rather, the research article describes a simulation of the actual folding of a protein. Moreover, the implementation of a specific computer arrangement "has enabled a simulation of protein folding" and as such, provides objective evidence for the enablement.

Further, and described in more detail below, one of ordinary skill in the art would be able to determine to a sufficient degree, as to not require undue experimentation, amino acid substitutions. First, a skilled artisan would know that in certain positions, certain amino acid changes would render the subsequent protein inactive and would avoid using said substitutions. Along those lines, MPEP 2164.08(b) clearly states that "[t]he presence of inoperative embodiments within the scope of a claim does not necessarily render a claim non-enabled." Thus, Applicant respectfully asserts that even if the skilled artisan substituted an amino acid at a non-optimum position, the invention is still enabled. Second, computational techniques were available at the time of filing for protein structural predictions based on sequence listings. The Examiner is directed to, for example, the Boston University Protein Sequence Analysis server (available at <http://bmerc-www.bu.edu/psa/>), which has been available since at least the filing

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date of the instant application. Indeed, the aforementioned website is still in use<sup>2</sup> providing data for the skilled artisan searching for structural predictions based on amino acid sequences. Consequently, modification of the instant claimed sequence would have been sufficiently routine to one of ordinary skill in the art.

2) "one of skill in the art would recognize that it is presumptuous to make functional assignments merely on the basis of some degree of similarity between sequences...." (page 13)

Applicant respectfully asserts that it is an everyday occurrence for one of ordinary skill in the art to perform analyses based on similarity between sequences. The skilled artisan routinely searches databases, such as GenBank, for homologous sequences in order to compare the known to for example, the recently discovered. Consequently, far from being "presumptuous," predicting function from sequence homology is an ordinary and routine activity for one of ordinary skill in the art.

3) "the evidence does not support the assertion that it would be routine to express heterologous D6D (i.e., from *P. patens*) in higher organism, such as animals (e.g., D6" from *P. patens* in mice, humans etc, etc.)." (page 16)

The Examiner lists research articles that appear to describe desaturase expression in a number of organisms and concludes 3) above because there is a "dearth of relevant teachings of expressing D6D from lower organism in animals." (Office Action 07 October 2006, page 16). Applicant respectfully asserts that the Examiner is in error when stating that transfection of animals was not routine at the time of filing. The Examiner is directed to Cho et al, (*J. Biol. Chem.* Vol. 274, No.1; p. 471-477, 1999) wherein the authors disclose in the abstract:

In this report we describe the cloning, characterization, and expression of a **mammalian Δ-6 desaturase**. ... Expression of the open reading frame in **rat hepatocytes** and Chinese **hamster** ovary cells .... (emphasis added)

Further, Applicant directs the Examiner to, for example, US patent number

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<sup>2</sup> As of 06 November 2006

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5,279,833 entitled *Liposomal Transfection of Nucleic Acids Into Animal Cells*. More specifically, Applicant directs the Examiner to at least the following:

It is the object of the present invention **to introduce nucleic acids into animal cells** using relatively available and relatively inexpensive reagents. This object, as well as other objects, aims and advantages are achieved by the present invention. (column 2, lines 33-37)(emphasis added)

and

A liposome **for introducing a nucleic acid into an animal cell** comprising ....  
(claim 1, column 14, lines 9-10) (emphasis added).

Accordingly, transfection of animals was routine at the time of filing of the instant application - including transfection of Δ6-desaturase. One of ordinary skill in the art, combining the instant disclosure with the knowledge charged to one skilled in the art, would have been able to practice the instant claimed invention.

Turning again to *Falkner*, "[a] patent need not teach, and preferably omits, what is well known in the art." (448 F.3d 1357, 1365 (Fed. Cir. 2006)(quoting *Spectra-Physics, Inc. v. Coherent, Inc.*, 827 F.2d 1524, 1534 (Fed. Cir. 1987)). *Falkner* acknowledged the coming of age of molecular biology by asserting that a chemical structure required for a claim does not always have to be provided by a specification and in the application. Possession of such details can be imputed if shown in a publication before the filing date which, for example, is exemplified in this application by WO 99/64616.

Indeed, the specification discloses the techniques one of ordinary skill in the art would use when attempting to modify SEQ ID NO: 1 and or SEQ ID NO: 2. The Examiner is directed to, for example, the following in the specification as originally filed:

It is moreover possible, for example, to replace particular amino acids by those with similar physico-chemical properties (bulk, basicity, hydrophobicity and the like). For example, arginine residues are replaced by lysine residues, valine residues by isoleucine residues or aspartic acid residues by glutamic acid residues. However it is also possible for one or more amino acids to be transposed in their sequence, added or deleted, or several of these measures can be combined with each other (page 11, lines 1-8)

Additionally, Applicant respectfully asserts that the skilled artisan would know how to

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attempt to mutate known sequences. For example, one of ordinary skill can introduce conservative amino acid substitutions at one or more predicted nonessential amino acid residues. Applicant respectfully asserts that a conservative amino acid substitution is known by the skilled artisan as one in which the amino acid residue is replaced with an amino acid residue having a similar side chain. Further, families of amino acids having similar side chains are well known to the skilled artisan as is their substitution in amino acid modifications. Additionally, as discussed above in the written description section, the skilled artisan would know of degeneracy and that more than one triplet can code for the same amino acid. Indeed, even high school biology coursework describes the degeneracy of the genetic code<sup>3</sup>

Moreover, creating the claimed sequences derived from SEQ ID NO: 1 and 2 according to the degeneracy of the genetic code would be a simple process for the skilled artisan. One of ordinary skill in the art is able to take the codon usage of the genetic code (readily available in even the most basic of Biology texts) and define each and every sequence derived from SEQ ID NO: 1 and 2 without any undue burden. It is simply a matter of matching amino acids to three letter codons.

In addition to the instant disclosure, applying *Falkner*, at least all known active sites, conserved regions and functionally essential amino acids would be known and available to one attempting to practice the claimed invention. Applicants respectfully assert that one of ordinary skill in the art would know what regions of the desaturase could or could not be modified and maintain function based on what is disclosed in the specification and what one of ordinary skill in the art is deemed to know. Moreover, implicit in the disclosure are functional desaturase enzymes. Further, data related to crystalline structure and protein folding from substituted and unsubstituted enzymes would also be known allowing for modification of the amino acid sequence. The skilled artisan is charged with knowledge of all the relevant art existing at the time of filing, and as such, would not require undue experimentation to practice the instant invention. Indeed, experiments such as those needed to create functional desaturase enzymes are

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<sup>3</sup> Available at <http://www.hsc.k12.in.us/staff/dbanitt/genetics/Biology%20Core%20Labs%20-%20protein%20synthesis-mutations.pdf>. Indeed, one of the purposes for this High School lab is to “[t]o analyze the effects of mutations in the genetic code on the resulting protein sequence.”

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commonly performed in laboratories across the country.

The aforementioned experimentation is routine for one skilled in the art. It must be appreciated that merely because experimentation may be "difficult and time consuming," the Federal Circuit fails to demand that the experimentation stand rejected as undue (*Falkner* at 1365) (quoting from the Board of Patent Appeals and Interferences decision on appeal).

In sum, Applicants respectfully assert that the instant claims are enabled based upon the requirements of §112, the MPEP and the rulings handed down from the Federal Circuit. One of ordinary skill in the art is able to practice the full scope of the claimed invention without undue experimentation based on a combination of the contents of the specification and what the skilled artisan is charged with knowing.

#### **Claim Rejections under 35 USC § 102**

Claims 1-4 and 7-9 are rejected for allegedly being anticipated by Girke et al. (Plant J., 1, 1998, 15: 39-48). Applicant respectfully traverses the rejection.

The date the relevant public (i.e. a person of ordinary skill in the art) can actually gain access to a publication is the date of publication for prior art purposes (*see, e.g., In re Bayer*, 568 F.2d 1357 (CCPA 1978) wherein the court stated that "[t]he date on which the public actually gained access to the invention by means of the publication is the focus of the inquiry"). The Examiner is directed to the attached letter from the library at the University of Hanover, Germany (Technische Informationsbibliotek Universitätsbibliotek Hannover). The letter states that the above mentioned cited reference was accessioned on July 27, 1998.

Accordingly, Girke et al. is not prior art under 102 and the rejection is moot.

#### **Claims rejected under 35 USC § 103**

Claims 1-10 are rejected for allegedly being obvious in view of Girke et al. alone or in further view of Napier et al. Applicant respectfully disagrees.

For similar reasons as those listed in the 102 rejection argument above, Girke is not prior art and such, cannot be used as means to establish an obviousness rejection under 103.

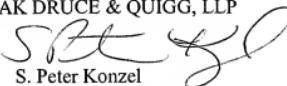
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Accordingly, the obviousness rejection is moot and Applicant respectfully requests its withdrawal.

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**Conclusion**

Applicant respectfully submits that the present application is in condition for allowance, which action is courteously requested. Please charge any shortage in fees due in connection with the filing of this paper to Deposit Account 14.1437. Please credit any excess fees to such account. Where the Examiner deems that prosecution of the application may be expedited by speaking with the Applicant's representatives, the Examiner is kindly requested to contact the Applicants' representative at the number below.

Respectfully submitted,  
NOVAK DRUCE & QUIGG, LLP  
  
S. Peter Konzel  
Registration No.: 53,152

**Customer No.: 26474**  
1300 Eye St. N.W.  
1000 West Tower  
Washington, D.C. 20005  
Phone: (202) 659-0100  
Fax: (202) 659-0105

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